IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

WARREN E. GUTHRIE et al.

Group Art Unit: 2618

Examiner: Tran, Tuan A.

Serial No.: 10/630,058

Filed: July 30, 2003

For: UNIVERSAL VEHICLE BASED GARAGE DOOR OPENER CONTROL SYSTEM AND METHOD

Attorney Docket No.: LEAR 04013 PUS (04013)

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Applicant requests review of the final rejection (final Office Action mailed September 25, 2006) of claims 1-6, 8, 10-18, and 20 in the above-identified patent application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the following pages 1-5.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (FIRST CLASS MAIL)

I hereby certify that this paper, including all enclosures referred to herein, is being deposited with the United States Postal Service as first-class mail, postage pre-paid, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, U.S. Patent & Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 on:

October 3, 2006	James N. Kallis	
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Remarks

Independent claims 1, 10, and 13 stand rejected as being anticipated by U.S. Patent No. 5,854,593 issued to Dykema et al. As set forth below, the independent claims and the remaining pending dependent claims are patentable over Dykema.

Examiner's final Office Action Position Regarding the Independent Claims and Dykema

Regarding claims 1 and 13, the Examiner posited Dykema discloses a control system for a barrier system having a transmitter 65 to transmit an activation signal having a RF carrier signal and a code; the control system having a transceiver 58 to be mounted in a vehicle and configured to receive RF carrier signals and transmit an activation signal for receipt by barrier system receiver 66; a controller 57 to be mounted in communication with transceiver 58 and user inputs 44, 46, 47, controller 57 configured to store the received RF carrier signals in a digital radio frequency memory DRFM, receive user input identifying an activation scheme having an associated variable code format (Fig. 8A; col. 13, lines 52-65), in response to user input, generate a variable code based on the identified activation scheme, select one of the stored RF carrier signals from the DRFM based on the identified activation scheme and transfer the selected RF carrier signal to transceiver 58, and control transceiver 58 to transmit an activation signal having the selected RF carrier signal modulated with the generated variable code (Fig. 8a; col. 15, lines 23-51; col. 5, line 51 - col. 6, line 27).

Regarding claim 10, the Examiner posited Dykema discloses transceiver 58 is configured to receive an activation signal having a fixed code from transmitter 65, and controller 57 is configured to store the fixed code of the received activation signal, sample the carrier signal of the received activation signal, and control transceiver 58 to transmit an activation signal having the sampled carrier signal modulated with the stored fixed code in response to user input (Figs. 6A, 8A; col. 11., lines 15-24; col. 13, line 52 to col. 14, line 5; col. 15, lines 23-51; col. 17, line 51 to col. 18, line 65).

The Independent Claims Compared to Dykema

Independent Claim 1

The control system set forth in claim 1 differs from Dykema in that the controller stores RF carrier signals received by the transceiver in a DRFM and the controller, in response to user input identifying an activation scheme having an associated variable code format, generates a variable code based on the identified activation scheme, selects one of the stored RF carrier signals from the DRFM based on the identified activation scheme and transfers the selected RF carrier signal from the DRFM to the transceiver, and controls the transceiver to transmit an activation signal having the selected RF carrier signal modulated with the generated variable code.

Dykema does not teach/suggest storing RF carrier signals in a DRFM. Rather, Dykema stores the carrier frequencies of activation signals being learned (i.e., Dykema stores numerals indicative of the carrier frequencies such as "850 MHz" and "900 MHz" instead of storing 850 and 950 MHz signals themselves). (See, col. 6, lines 14-19, "Thus, by identifying and storing the carrier frequency, modulation scheme, and data code of a received RF activation signal B originating from a remote transmitter 65, transceiver 43 may subsequently transmit an RF signal T having the identified characteristics of RF signal B that are necessary to activate a device such as garage door opener 66.")

Dykema does not teach/suggest selecting one of a plurality of stored RF carrier signals from a DRFM based on an activation scheme identified from user input nor does Dykema teach/suggest transferring the selected RF carrier signal from the DRFM to a transceiver for the transceiver to transmit an activation signal comprising the selected RF carrier signal modulated with a variable code generated by a controller. Rather, the controller of Dykema instructs a transceiver which radio frequency to use for an activation scheme identified from a received RF activation signal and the transceiver then uses signal generators, mixers, etc., to generate a RF carrier signal having the radio frequency. (See, col. 6, lines 14-19, "Thus, by identifying and storing the carrier frequency, modulation scheme, and data code of a received RF activation signal B originating from a remote transmitter 65, transceiver 43 may subsequently transmit an RF signal T having the identified characteristics of RF signal B that are necessary to activate a device such as garage door opener 66.")

Independent Claim 10

The control system set forth in claim 10 differs Dykema in that the controller is configured to sample the carrier signal of an activation signal received by the transceiver from a barrier system transmitter using a DRFM, transfer the sampled carrier signal from the DRFM to the transceiver, and control the transceiver to transmit an activation signal having the sampled carrier signal modulated with the fixed code of the received activation signal in response to user input.

Dykema does not teach/suggest sampling the carrier signal of an activation signal received by a transceiver from a barrier system transmitter using a DRFM. Rather, the transceiver of Dykema includes a tunable RF circuit that is selectively tuned to the carrier signal of a received activation signal during a training sequence. (See the Abstract and the Summary of the Invention sections.)

Dykema does not teach/suggest transferring the sampled carrier signal from a DRFM to the transceiver in order for the transceiver to transmit an activation signal comprising the sampled carrier signal modulated with a fixed code. Rather, the controller of Dykema instructs the transceiver which radio frequency to use for an activation scheme identified from the received RF activation signal and the transceiver then uses signal generators, mixers, etc., to generate a RF carrier signal having the radio frequency modulated with a fixed code. (See, col. 6, lines 14-19 of Dykema as noted above.)

Independent Claim 13

The control method set forth in claim 13 differs Dykema in that RF carrier signals are stored in a DRFM and one of the stored RF carrier signals is selected from the DRFM based on an identified activation scheme for use in transmitting an activation signal comprising the selected RF carrier signal and a generated variable code.

Dykema does not teach/suggest storing RF carrier signals in a DRFM. Rather, Dykema stores the carrier frequencies of activation signals being learned (i.e., Dykema stores numerals indicative of the carrier frequencies such as "850 MHz" and "900 MHz" instead of storing 850 and 950 MHz signals themselves). Further, Dykema does not teach/suggest selecting one of the stored RF carrier signals from the DRFM based on an identified activation scheme for use in transmitting an activation signal comprising the selected RF carrier signal

and a generated variable code. Rather, the controller of Dykema instructs a transceiver which radio frequency to use for an activation scheme identified from a received RF activation signal and the transceiver then uses signal generators, mixers, etc., to generate a RF carrier signal having the radio frequency. (See, col. 6, lines 14-19 of Dykema as noted above.)

Applicant's Response to Examiner's Response to Arguments in the final Office Action

The Examiner noted the Applicant argued Dykema does/not teach suggest storing RF carrier signals in a DRFM. The Examiner disagreed and posited Dykema discloses RF carrier signals being down-converted, sampled (digitized), and stored in memory (citing col. 17, line 51 to col. 18, line 5). The Applicant disagrees. This cited section of Dykema regards detecting the code (i.e., "code signal") contained in a received activation signal comprising a RF carrier signal modulated with the code. To this end, this cited section teaches the activation signal is down-converted with a reference frequency using a mixer 79 such that the reference frequency effectively cancels out the RF carrier signal to leave the code signal. The code signal (as opposed to the activation signal) is then sampled and the sampled code signal data is stored in memory. For instance, col. 17, line 64 to col. 18, line 5:

> In general, microcontroller 57 stores the code signal by sampling the [code] signal at a relatively high sampling rate such as one sample per 68 microseconds. Different sampling rates may be selected for different code signals based upon detected characteristics to the code format of the received code signal. In this manner, microcontroller 57 may reproduce the code signal during a transmit mode, by reading the stored code signal from memory using the same sampling rate at which it stored the code signal. (Emphasis added.)

As such, Dykema does not teach/suggest storing RF carrier signals in a DRFM.

The Examiner noted the Applicant argued Dykema does not teach/suggest selecting one of a plurality of stored RF carrier signals from a DRFM based on the activation scheme identified from the user input to transfer to the transceiver for the transceiver to transmit an activation signal having the selected RF carrier signal modulated with a code. The Examiner disagreed and posited Dykema suggests: during the training sequence, RF carrier signals associated with codes (fixed or variable) corresponding to switches 46, 47, 47 are respectively down-converted, sampled, and stored in the memory (citing col. 11, lines 15-24;

col. 17, line 64 to col. 18, line 9); if the selected channel has been trained, the stored data (ASK data) associated with the selected channel is read from the memory (one of a plurality of stored RF signals is selected based on user input) (citing col. 13, lines 62-65) and is up-converted by VCO 73 of the transceiver (transfer to the transceiver) (Fig. 6A; col. 11, lines 15-24) to a selected RF carrier signal. The Applicant disagrees. Dykema teaches traditional RF circuitry such as VCO 73, mixer 79, oscillator 103, LC resonator 104, etc. for generating RF carrier signals. Dykema does not teach/suggest storing actual RF carrier signals. Instead, Dykema teaches storing characteristics of RF carrier signals such as an identifier identifying their frequency (e.g., "850 Mhz, "950 Mhz", etc.). Dykema uses these stored frequency identifiers to instruct its RF circuitry at what frequency to generate a RF carrier signal and, in turn, the RF circuitry generates the RF carrier signal. Further, the "ASK data" refers to the code signal which is amplitude-shift keyed (modulated) onto the RF carrier signal of an activation signal. As such, the code signal (i.e., the ASK data) is stored in memory for a channel as opposed to the RF carrier signal itself being stored in memory. Along with the ASK code signal data, the frequency of the RF carrier signal (as opposed to the RF carrier signal itself) is also stored in memory for the channel. Thus, when the channel is activated in response to a user actuating switch 46, the ASK code signal data along with the frequency identifier of the RF carrier signal (as opposed to the RF carrier signal itself) is provided to the traditional RF circuitry to generate a RF carrier signal modulated with the ASK code signal data. As such, Dykema does not teach/suggest selecting one of a plurality of RF carrier signals stored in a DRFM.

Respectfully submitted,

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By_____

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